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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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HANS FIESEL

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04/23/2007

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EXAMINER

NATNAEL, PAULOS M

ART UNIT

PAPER NUMBER

2622

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	09/325,930		FIESEL, HANS	
	<b>Examiner</b>		<b>Art Unit</b>	
	Paulos M. Natnael		2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 7-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 7-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/9/07 has been entered.

#### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 7-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. While the specification discloses that the residues of the adjacent channels are attenuated or suppressed, the specification does not disclose or describe partially attenuating the upper and lower adjacent channels. Thus, the newly added limitation to claims 7 and 13, the first filter at least "partially attenuating the upper and lower adjacent channels" are new matter. If applicant

Art Unit: 2622

contends this is not new matter, specific location, i.e., page #, line # should be pointed out.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 7-9,11,12 are rejected under 35 U.S.C. 102(b) as being anticipated by Boie, U.S. Pat. No. 5,748,262.

Considering claim 7,

a) the claimed a mixer having first and second inputs and an output is met by Multiplier 11, (Fig.2)

b) the claimed first filter being coupled to said first input of said mixer and adapted to provide an intermediate-frequency television signal (s2) thereto, the first filter at least partially attenuating the upper and lower adjacent channels, is met by filter 7, Fig. 2, which adapted to eliminate the signals of the channels adjacent to the constant

Art Unit: 2622

frequency limit of the transposed signal (See col. 3, lines 12-15. See also col. 4, lines 29-51)

c)the claimed an oscillator coupled to said second input of said mixer and adapted to provide an oscillator-signal (u) lying in a range of said lower adjacent picture carrier (NBT), is met by Oscillator 12, Fig.2;

d) the claimed a second filter coupled to said output of said mixer, said second filter having a high-pass selectivity skirt for attenuating said adjacent picture channels to a negligible residual amplitude is met by Filter 13, fig.2;

As to the newly added limitation, (e) the first filter at least partially attenuating the upper and lower adjacent channels, Boie discloses "The signal at the output of the filter 7 includes not only the desired signal  $S_{sub.if.sup.N}$  but also a signal corresponding to the lower adjacent channel  $S_{sub.if.sup.N-1}$ , since the bandwidth  $K$  of the filter 7 is, for most standards, greater than the width  $L$  of the band 3. The signal at the output of the filter 7 is represented in FIG. 3C; it includes the desired signal 3 ( $S_{sub.if.sup.N}$ ) and a part 9 of the lower adjacent signal  $S_{sub.if.sup.N-1}$ . (See col. 4, lines 39-54 and col. 5, lines 34-37). However, since the claim recites only that the first filter ***partially attenuates the upper and lower adjacent channels***, it follows that there is still some lower adjacent channel signal remaining after the filtering process. Thus, Boie still meets the claimed subject matter because the adjacent channel signals are not completely eliminated by the filtering process of the first filter.

Art Unit: 2622

As to claim 8, Boie discloses in FIG.3D wherein "the frequency  $f_{sub.pc}$  has been lowered by a value that depends on the frequency of the local oscillator 12." (Col. 5, lines 14-16)

Considering claim 9, Boie discloses the Filter 13, Fig. 2. See also col. 5, line 62 through col. 6, line 2.

Considering claim 11, the claimed control unit is inherent because a control unit such as a microprocessor, microcomputer, or any type of logic unit would have to be available in order to be able to control the overall function of the system by supply control signals to all units/parts of the system.

Considering claim 12, the claimed digitizing means, is met analog-to-digital converter (A/D) 23, (Fig.2).

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims **10,13-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Boie, U.S. Pat. No. 5,748,262.

Considering claim **10**, Boie discloses all claimed subject matter except for the claimed "wherein the local-oscillator signal (u) is a square-wave signal, particularly a signal having the values +1 and -1".

Boie doesn't appear to disclose whether the local-oscillator signal (u) is a square-wave signal with the values +1 and -1. However, Boie suggests that, "the frequency of the oscillator 12 can be modified by means of a voltage U applied to the oscillator 12, in order to adapt the fixed frequency  $f_{sub.Lo}$  to the TV standard concerned". (See col. 5, lines 2-5) Therefore, it would have been an obvious matter of design choice to the skilled in the art at the time the invention was made to modify the oscillator frequency with a desired value as suggested by Boie, since Applicant has not disclosed that having the range of +1 to -1 solves any stated problem, and it appears that any desired value would perform equally well.

Considering claim **13**, Boie discloses the following claimed subject matter, note;

- a) filtering an intermediate-frequency signal with a first filter, is met by the filter 7, Fig.2;
- b) generating an oscillator signal, the oscillator signal lying in a range of said lower adjacent signal, is met by oscillator 12, the frequency of which may be modified. (See also col. 5, lines 2-5)
- c) mixing said filtered intermediate-frequency signal and said oscillator signal (u) is met by the Mixer 10, Fig.2;

Art Unit: 2622

d) filtering said mixed signals using a second filter having a high-pass selectivity skirt to attenuate said adjacent channels to a negligible residual amplitude, is met by the Filter 13, Fig.2;

Except for;

e) separating said high-pass selectivity skirt filtered signal into visual and audible components for reproduction.

f) the claimed ***partially attenuates the upper and lower adjacent channels;***

Regarding d), Boie doesn't disclose a method of separating the filtered signal into visual and audible components for reproduction. However, Examiner takes Official Notice here in that separating or demodulating or demultiplexing video/image/picture and audio signal and reproducing separately is well known in the art, and therefore, would have been obvious to the skilled in the art to modify the reference of Boie by providing a demultiplexer so that the signals are appropriately separated and transmitted to appropriate devices such as the display and speakers of the TV receiver.

Regarding f), see rejection of claim 7(e).

Considering claim 14, the claimed wherein said first filter comprises a surface-wave filter, is met by the disclosure that the "two filters are advantageously SAW (surface wave) filters" (col. 3, lines 19-20)

Considering claim 15, see rejection of claim 8;

Considering claim 16, see rejection of claim 9;



Art Unit: 2622

Considering claim 17, see rejection of claim 10;

Considering claim 18, is met by A/D converter 23. (Fig.2).

As to claims 19 and 20, see rejection of claim 11.

### ***Response to Arguments***

8. Applicant's arguments filed April 9, 2007 have been fully considered but they are unpersuasive. The applicant argues that the second filter 13 of Boie has a high frequency band pass slope to cut away the residue 9 of an adjacent channel N-1. Since the second filter of Boie removes the adjacent channel by its low-pass selectivity skirt 15, that is located above the highest frequency of the desired channel, the selection must operate at a much higher frequency range than in the presently claimed frequency converter, which requires a second filter having a high-pass selectivity skirt for attenuating the adjacent channels to a negligible residual amplitude. (See remarks pages 7 and 8).

The examiner disagrees. Boie discloses a band pass filtering and asserts that "the limit 5a remains substantially constant, whatever the TV standard is used, so the filter 13 whose limit 15 is also constant can be used for all TV standards... The width Q of the pass-band of the second filter SAW is chosen such that the signal to be processed is not altered by the second filter 13, whatever the TV standard. In other

Art Unit: 2622

words, we choose the bandwidth Q such that in all cases, whatever the standard, the lower limit 16 of the pass-band 14 of the second filter 13 is less than the lower limit 6a of the signal to be processed. (col. 5, lines 45-55) Furthermore, Boie teaches, "The selected IF signal, shown in FIG. 3E, provides good dynamic resolution because it is no longer encumbered with parasitic signals from the adjacent channels. Such as signal could be obtained for any TV standard without having to modify the filters 7 and 13, [emphasis added] the adaptation being made only at the local oscillator 12, using a voltage U to adjust the transposition effect corresponding to the transition from FIG. 3C to FIG. 3D. Besides, as shown above, since the claim recites only that the first filter ***partially attenuates the upper and lower adjacent channels***, it follows that there is still some upper and lower adjacent channel signal remaining after the filtering process. Thus, Boie still meets the claimed subject matter because the adjacent channel signals are not completely eliminated by the filtering process in the first filter. Thus, the argument is unpersuasive.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paulos M. Natnael whose telephone number is (571) 272-7354. The examiner can normally be reached on 8AM-4:30PM.

Art Unit: 2622

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Paulos M. Natnael  
Primary Patent Examiner  
Art Unit 2622

April 10, 2007